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TEST ELECTRIC HARDENING, GRINDING PROCESSES

CREATE ELECTRIC-SPARK-HARDENING DIVISION AT AUTO PLANT -- Yerevan, Kommunist, 1 Feb 51

At the beginning of 1950, the Yerevan Avtodetal' Plant received electric-spark units with which experimental and research work was conducted at the plant's central laboratory to determine the work conditions and alloy best suited for hardening by this method.

The first experiments were conducted with scarce twist drills having a diameter of 6.3 millimeters. Experiments with the use of VK-8 alloy for hardening the lips of drills did not give satisfactory results. Microscopic study of the fused layer showed that it was unevenly distributed along the cutting edge and therefore the durability of the drill was not increased.

In a later experiment, the work conditions were changed and the VK-8 was replaced by T15K6 hard alloy. As a result, 544 holes were produced by this drill as compared with 425 before hardening. With the application of a double layer to the cutting edge, the durability of the drill increased nearly one-and-a-half times.

Rapid dulling of the drill in the drilling of center holes in primary shafts for the ZIS-5 truck delayed fulfillment of the daily schedule along the entire conveyer line and increased machining time.

Hardening a 35-millimeter-diameter drill by the electric-spark method increased the speed of cutting 15 percent, and the durability of the drill almost doubled.

After many experiments and studies had been completed, a special division for electric-spark hardening was set up at the plant.

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TEST ELECTROCONTACT GRINDING OF GEARS -- Alma-Ata, Kazakhstanskaya Pravda, 4 Mar 51

A new method of electrocontact grinding of gear teeth has been tested at the Alma-Ata Heavy-Machine-Building Plant. Gears can now be ground on ordinary machine tools.

The speed of grinding has increased ten times. The quality of work produced on the experimental machine tool meets all technical requirements.

This method can be used not only at plants but also at MTS and sovkhoz workshops.

ELECTROLYTE CLOGS MACHINE TOOL -- Leningradskaya Pravda, 27 Feb 51

Anode tool grinding is used extensively at the Leningrad Vulkan Plant. Lately, however, the tool makers have complained that the electrolytic fluid clogs the machine tool. A number of compositions were tried, and it was finally decided to add 5-10 percent mineral oil to the regular electrolyte. As a result, nonproductive time in grinding operations has been considerably reduced.

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